

WHAT IS CLAIMED IS:

1 1. A turbine fuel pump comprising:  
2 a cylindrical casing;  
3 an electric motor accommodated in the casing;  
4 a pump housing mounted into the casing, the pump housing  
5 including a suction port, a discharge port and a fuel path  
6 connected to the suction and discharge ports; and  
7 an impeller disposed within the pump housing and driven  
8 around an axis in a rotational direction by the electric  
9 motor, the impeller including a generally annular body and a  
10 plurality of vanes projecting radially outwardly from the  
11 body and disposed within the fuel path,  
12 each of the vanes being formed into a generally  
13 rectangular plate including a tip end face that extends  
14 circumferentially to define an outer peripheral surface of  
15 the impeller, a front face located on a forward side in the  
16 rotational direction of the impeller and having a root  
17 portion located on a side of the body of the impeller and a  
18 tip end portion located on a side of an outer periphery of  
19 the impeller, the front face being curved such that the tip  
20 end portion is positioned forwardly in the rotational  
21 direction of the impeller relative to the root portion, a  
22 rear face located on a rearward side in the rotational  
23 direction of the impeller, and a chamfer portion disposed  
24 between the tip end face and the tip end portion of the  
25 front face.

1 2. The turbine fuel pump according to claim 1, wherein the  
2 chamfer portion is formed by cutting a corner between the  
3 tip end face and the tip end portion of the front face.

1 3. The turbine fuel pump according to claim 1, wherein the  
2 chamfer portion has a uniform length between the tip end

3 face and the tip end portion of the front face as measured  
4 in section perpendicular to the axis.

1 4. The turbine fuel pump according to claim 3, wherein the  
2 uniform length of the chamfer portion is in a range of 0.05  
3 mm to 0.15 mm.

1 5. The turbine fuel pump according to claim 1, wherein the  
2 chamfer portion is aligned with a plane containing the axis.

1 6. The turbine fuel pump according to claim 1, wherein the  
2 chamfer portion is inclined relative to a plane containing  
3 the axis.